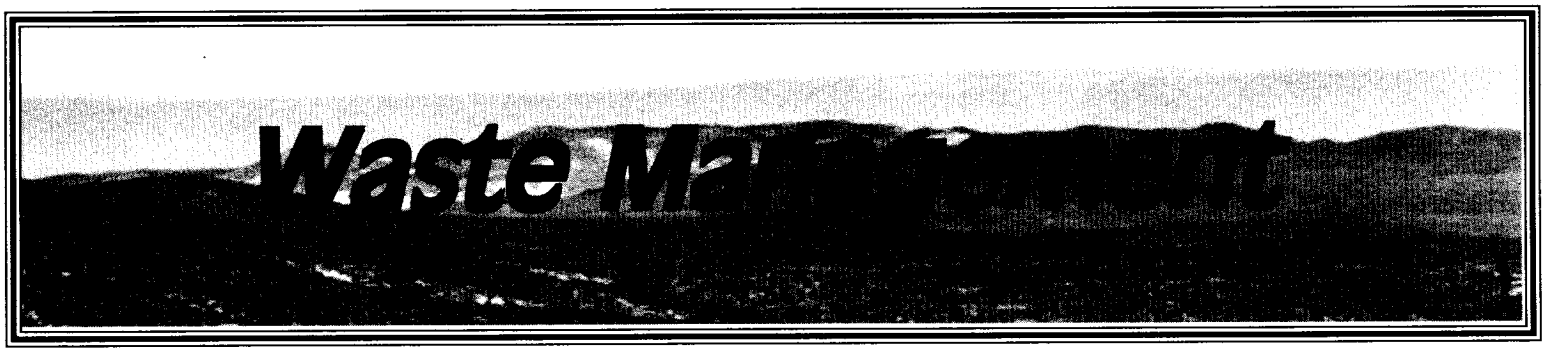


Overview

The primary mission of the Waste Management Division at the U.S. Department of Energy Nevada Operations Office (DOE/NV) is to manage radioactive and hazardous waste generated by DOE and defense industry activities. DOE/NV's Waste Management Division ensures that the acceptance, treatment, storage, and/or disposal of waste is carried out in accordance with federal, state, and local regulations. The Division is tasked with maintaining clean, safe, and technologically advanced disposal sites. Prior to disposing any of their waste at the Nevada Test Site (NTS), generators must undergo a rigorous certification and acceptance process.

Demonstrating its commitment to provide the public with information about current activities, the Waste Management Division holds public meetings and workshops, creates publications on waste management activities, and provides speakers through the DOE/NV Speaker's Bureau.

The Waste Management Program is organized into three areas: Low-Level Waste, Mixed Low-Level Waste, and Transuranic/Mixed Transuranic Waste. The following is a brief description of each of these three areas and also other activities conducted by the Waste Management Division.

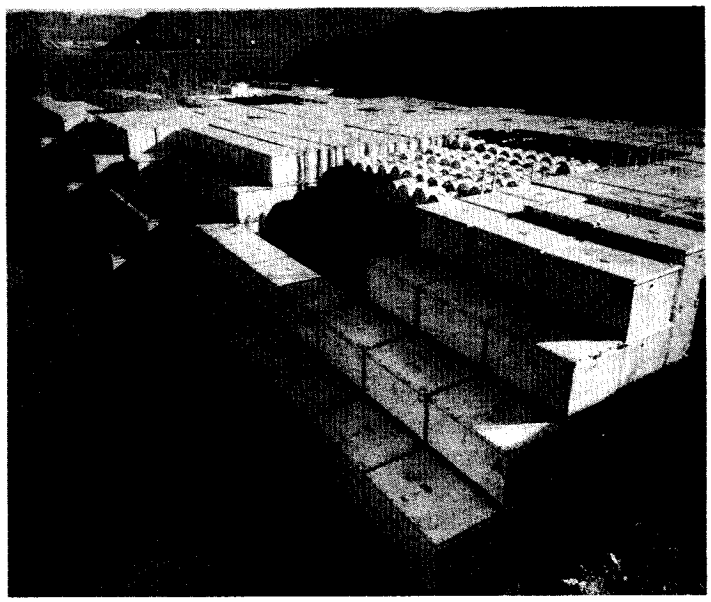
Low-Level Waste

Low-level waste contains various amounts of radionuclides and can generally be handled without protective shielding. Low-level waste normally contains radioactive elements dispersed in materials such as rags, papers, soils, filters, tools, equipment, and discarded protective clothing. Currently, low-level waste is disposed in two areas at the NTS. In Area 5, waste is disposed in shallow trenches and pits. Subsidence craters from past nuclear tests are used for bulk low-level waste disposal in Area 3. Low-level waste is sent to the NTS from approved DOE and U.S. Department of Defense generators across the United States.

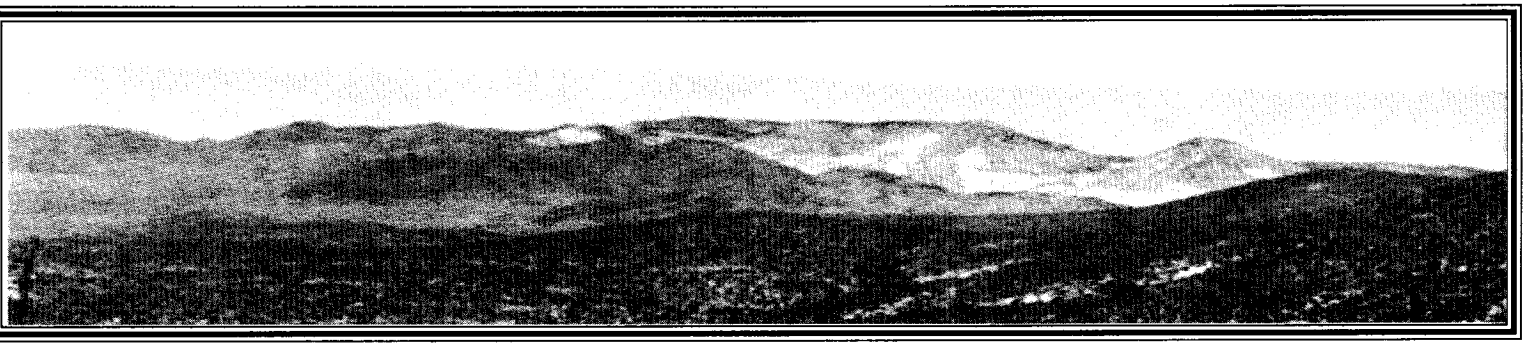
Approval to ship waste is granted only after the waste generator certifies that all waste meets the NTS Waste Acceptance Criteria. The criteria include specific requirements for characterization, waste documentation, packaging, identification, and record keeping. Contractor and DOE personnel provide guidance to the waste generators and verify that each waste generator's facility has established a program that complies with the waste acceptance criteria. Waste will not be accepted at the NTS until the generator can demonstrate compliance through the approval process.

Mixed Low-Level Waste

Mixed low-level waste contains both hazardous waste, subject to the conditions of the *Resource Conservation and Recovery Act (RCRA),* and radioactive waste regulated by the *Atomic Energy Act.* Mixed low-level waste is evaluated separately from other low-level waste because of the presence of RCRA-regulated materials such as toxic, corrosive, reactive, or ignitable substances or other hazardous constituents specifically identified by the U.S. Environmental Protection Agency (EPA). A broad spectrum of processes and activities generate mixed low-level waste including equipment maintenance, materials production, environmental restoration, and facility deactivation and



Low-level waste is packaged in boxes and drums and neatly stacked at the Radioactive Waste Management Site for disposal.



decommissioning. Only DOE/NV mixed low-level waste generated in the State of Nevada may currently be disposed at the NTS.

Mixed wastes, including mixed transuranic waste, are treated, stored, and disposed according to the requirements identified in RCRA. The EPA and state governments are authorized by RCRA to monitor and control hazardous waste during the waste management cycle. Regulations issued by the EPA address generation, transport, treatment, storage, and disposal of hazardous waste (often referred to as "cradle-to-grave" management).

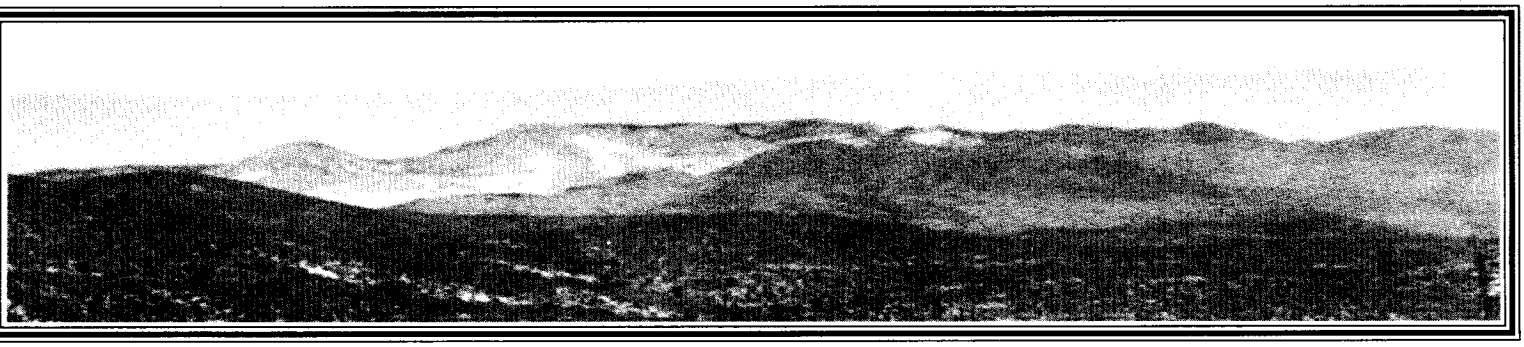
Mixed waste must also be managed in accordance with requirements of the Federal Facility Compliance Act (FFCAct) Consent Order (CO). The FFCAct of 1992 requires the Secretary of Energy to identify existing quantities of mixed waste, develop Site Treatment Plan, and create treatment capacity and technologies for mixed waste. Site Treatment Plans must be established for each facility at which DOE stores or generates these wastes. Site Treatment Plans are submitted to respective state regulatory agencies or the EPA to identify the process by which DOE sites will provide the necessary mixed waste treatment capacity. The State of Nevada and DOE/NV approved the FFCAct CO and the NTS Site Treatment Plan in March 1996. The FFCAct CO contains schedules derived from the NTS Site Treatment Plan and identifies specific facilities for treating the mixed waste streams on the site. If NTS mixed waste is managed in compliance with the Site Treatment Plan and the FFCAct CO, DOE/NV is exempt from fines and penalties regarding mixed waste storage prohibitions under RCRA. DOE/NV is required by the FFCAct CO to submit an annual update to the Site Treatment Plan to the State of Nevada Division of Environmental Protection.

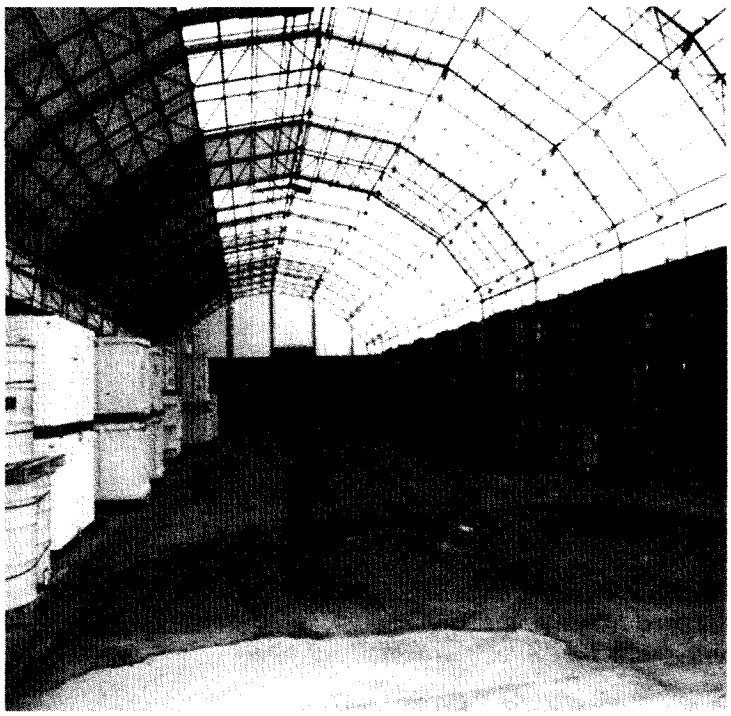
Mixed low-level waste at the Nevada Test Site.

The Mutual Consent Agreement, signed January 13, 1994, modified in June 1995, and again in November 1998, authorizes the storage and management of mixed low-level waste on the Area 5 Transuranic Waste Pad. Under this agreement, for mixed waste identified or generated after March 1996, DOE/NV must develop and submit specific treatment and disposal plans to the State of Nevada Division of Environmental Protection within nine months of placement on the transuranic waste pad.

Transuranic Waste

Transuranic waste results from activities involving the handling of plutonium and contains man-made elements heavier than uranium, hence the name "trans" or "beyond" uranium. Items such as contaminated laboratory gloves, tools, sludge, and other materials from production facilities make up the majority of transuranic waste. If radioactive waste contains additional hazardous materials as defined by RCRA, it becomes mixed transuranic waste. At the NTS, mixed transuranic waste is stored on a RCRA-compliant pad in an enclosed structure. Each week, waste management specialists inspect and survey the waste containers.





Transuranic waste stored at the Nevada Test Site.

Because materials contaminated with transuranic radionuclides can take thousands of years to decay, transuranic and mixed transuranic wastes require long-term isolation. Transuranic wastes contain alpha-emitting radionuclides with half-lives greater than 20 years, meaning it will take more than 20 years for the radioactivity to decrease by half. Currently, transuranic and mixed transuranic wastes are not normally generated at the NTS. The majority of transuranic and mixed transuranic wastes stored at the NTS were produced at other sites. The waste is in temporary storage until the Waste Isolation Pilot Plant, near Carlsbad, New Mexico, can accept it. At the Waste Isolation Pilot Plant, waste will be disposed in a geologically stable salt formation located 2,150 feet underground. The salt encases waste containers, preventing any radioactivity from escaping. The Waste Isolation Pilot Plant is the final destination for most of the nation's defense-related transuranic waste.

Other Waste Management Activities

Hazardous and Sanitary Waste Management. Hazardous and sanitary waste are two other waste types that are generated at the NTS. Hazardous waste is a nonradioactive waste designated as hazardous by the EPA or State of Nevada regulations. Waste is considered hazardous if is it ignitable, corrosive, reactive, toxic, or if it appears on a specific EPA list. Examples of hazardous waste are heavy metals, paint thinner, and mercury. Hazardous waste at the NTS is usually generated through support activities such as vehicle or building maintenance. Hazardous waste is stored on the RCRA permitted hazardous waste unit.

Sanitary waste is also a nonradioactive waste that is generated by routine office and field activities. Sanitary waste streams must be managed in accordance with state regulations and disposed in permitted sanitary landfill facilities. Sanitary waste water is also collected and disposed at sewage lagoons located at the NTS.

Emergency Management Training. DOE/NV in coordination with the State of Nevada, Division of Environmental Management, sponsors emergency management training to better prepare local responders such as Nevada fire fighters, law enforcers, and emergency medical/response personnel for hazardous or radioactive accidents. Emergency responders are trained to identify different types of radioactive materials, to know the hazards involved, and to perform the correct response procedures.

The hazardous waste pad at the Nevada Test Site.

First responders are trained in regard to transportation of radioactive waste to the Nevada Test Site.

The DOE/NV plays an important role in the management of wastes generated by the Nevada Test Site and other DOE-approved generators across the United States. New technologies are being developed to help characterize and dispose of the waste more efficiently. While managing the waste, the Waste Management Division works closely with state representatives to guarantee full compliance with all applicable regulations and to ensure the safety of the workers, the public, and the environment.

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For more information, please contact:
U.S. Department of Energy
Nevada Operations Office
Office of Public Affairs and Information
P.O. Box 98518
Las Vegas, NV 89193-8518
Email: NV@nv.doe.gov
(702)295-3521
http://www.nv.doe.gov